

1491IHSSF1112



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Site Name PATTERSON PROPERTY

DocumentType Ranking (RANK)

RptSegment 1

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Box SF1112

AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY

INACTIVE SITES RANKING SYSTEM
SUMMARY SHEET

Site Name:	Patterson Property		
Location:	900 Jefferson Street, Roanoke Rapids, Halifax County		
ID Number:	NONCD 0002858		
Ranked By:	Wade Kirby	Date:	February 23, 2010
Reviewed By:	John Walch	Date:	February 25, 2010

Site Description/Comments:

The Bibb Company formerly owned the property and operated a textile plant. The Bibb Company became a subsidiary of Dan River. Dan River filed for bankruptcy in 2009.

The Bibb Company sold the property to the Roanoke Rapids Graded School District around 10 years ago. The School Board was interested in the property since it was adjacent to their schools. It gave them an opportunity to provide parking and expand the school in the future.

The School Board conducted an environmental assessment in 2008. Metals (arsenic and chromium), benzo(a)pyrene, and trichloroethene were detected in soil samples at various depths above state regulatory levels. Metals (arsenic, barium, chromium, and lead) were detected in groundwater samples above 15A NCAC 2L standards. The School Board lacks the funding to continue site investigation and remediation.

The School Board is seeking a purchaser for the property.

Route Scores: GW = 65.18 SW = 37.25 A = 0 P = 4.00

Total Score:
$$\frac{((65.18)^2 + (37.25)^2 + (0)^2 + (4.00)^2)^{1/2}}{2} = \underline{\underline{37.59}}$$

I. GROUND WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Score
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A. Route Characteristics

1. Depth to Water Table 0 2 4 6 **8** 10
2. Net Precipitation 0 **1** 2 3
3. Hydraulic Conductivity 0 1 **2** 3
4. Physical State 0 1 2 **3**

Total Route Characteristics Score

14

B. Containment

0 1 2 **3**

3

C. Waste Characteristics

1. Toxicity/Persistence 0 3 6 9 12 15 **18**
2. Hazardous Waste Quantity 0 1 2 3 4 **5** 6 7 8

Total Waste Characteristics Score

23

Ground Water Route of Migration Score

The Ground Water Route of Migration Score is obtained by multiplying lines A, B, and C and dividing this by 14.82 to give a score between 0 and 100.

Total Ground Water Route of Migration Score: 65.18

II. SURFACE WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Score
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A. Route Characteristics

- | | |
|---|--------------|
| 1. Facility Slope and Intervening Terrain | 0 1 2 3 |
| 2. 1-yr., 24-hour Rainfall | 0 1 2 3 |
| 3. Distance to Nearest Surface Water | 0 2 4 6 8 10 |
| 4. Physical State | 0 1 2 3 |

Total Route Characteristics Score	8
B. Containment	0 1 2 3

C. Waste Characteristics

- | | |
|-----------------------------|-------------------|
| 1. Toxicity/Persistence | 0 3 6 9 12 15 18 |
| 2. Hazardous Waste Quantity | 0 1 2 3 4 5 6 7 8 |

Total Waste Characteristics Score	23
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Surface Water Route of Migration Score

The Surface Water Route of Migration Score is obtained by multiplying lines A, B, and C and dividing this by 14.82 to give a score between 0 and 100.

Total Surface Water Route of Migration Score: 37.25

III. AIR ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Score
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A. Waste Characteristics

- | | |
|-----------------------------------|-------------------|
| 1. Reactivity and Incompatibility | 0 1 2 3 |
| 2. Toxicity | 0 3 6 9 |
| 3. Hazardous Waste Quantity | 0 1 2 3 4 5 6 7 8 |

Total Waste Characteristics Score	Not Scored
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B. Targets

- | | |
|--------------------------------------|-----------------------------|
| 1. Population Within a 4-Mile Radius | 0 9 12 15 18
21 24 27 30 |
| 2. Distance to Sensitive Environment | 0 2 4 6 |
| 3. Land Use | 0 1 2 3 |

Total Targets Score	Not Scored
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Air Route of Migration Score

The Air Route of Migration Score is obtained by multiplying lines A and B and dividing this by 7.80 to give a score between 0 and 100.

Total Air Route of Migration Score:

0

IV. DIRECT CONTACT ROUTE SCORE SHEET

Rating Factor	Assigned Value (Circle One)	Score
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A. Residential Population

1. Toxicity 0 3 6 9

2. Targets
 - a) High Risk Population
(count x 8, max. 100) _____
 - b) Total Resident Population
(count x 2, max. 100) _____
 - c) Sensitive Environment 0 10 15 20 25

Resident Target Score
(lines 2a + 2b + 2c, max. 100)

Total Residential Population Score	Not Scored
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B. Nearby Population

1. Likelihood of Exposure
(matrix score) 0.50
 - a) Area of Contamination 0 25 50 (75) 100
 - b) Accessibility/
Frequency of Use 5 25 (50) 75 100

2. Toxicity 0 3 6 (9)

3. Targets (max. 100) 16

Total Nearby Population Score	72
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Overall Population Exposure Score

The Overall Population Exposure Score is determined by adding lines A and B and dividing this by 18 to give a score between 0 and 100.

Total Population Exposure Route of Migration Score: 4.00

DOCUMENTATION RECORDS
FOR
STATE HAZARD RANKING SYSTEM

INSTRUCTIONS: Briefly summarize the information you used to assign a score to each factor and document the source of the information and/or the rationale for each score.

Facility Name:	Paterson Property
ID Number:	NONCD 0002858
Location:	Roanoke Rapids, Halifax County
Date Scored:	February 23, 2010
Person Scoring:	Wade Kirby
Factors Not Scored:	Air Route, Residential Population

Comments:

References:

1. Patterson Property (Roanoke Rapids, Halifax County), State File, NC Superfund Section, Raleigh, NC.
2. North Carolina Atlas, University of NC Press, Chapel Hill, NC, 1975.
3. Rainfall Frequency Atlas of the US, Technical Paper 40, US Department of Commerce, Washington, DC, 1963.
4. 2000 Census of Population and Housing: Summary Population and Housing Characteristics: North Carolina, US Department of Commerce. <http://quickfacts.census.gov/qfd/>.
5. Dangerous Properties of Industrial Materials, N. Irving Sax, Van Reinhold Company, Inc., 1984.
6. 40 CFR 300, Appendix A, July 1, 1988.
7. ACME Mapper 2.0

GROUND WATER ROUTE

(Ref. #)

A. Route Characteristics:

2. Depth to Water Table:

8: Contamination in groundwater (1)

2. Net Precipitation:

1:	Mean Annual Precipitation	=	46 in/yr	(2)
	<u>Mean Annual Evaporation</u>	=	<u>41 in/yr</u>	
	Net Precipitation	=	5 in/yr	

2. Hydraulic Conductivity of Unsaturated Zone:

2: Piedmont (1)

4. Physical State:

3: Liquids (based on presence of PAHs and TCE) (1)

2. Containment:

3: No containment structure (1)

C. Waste Characteristics:

2. Toxicity/Persistence:

18: Arsenic, barium, chromium, and lead (5)

2. Hazardous Waste Quantity:

5: Quantity Unknown (1)

SURFACE WATER ROUTE

(Ref. #)

A. Route Characteristics:

1. Facility Slope and Intervening Terrain:

0: Facility Slope: $\leq 3\%$
Intervening Terrain: $\leq 3\%$

(7)

2. One-year 24-hour Rainfall:

1: 3.0 in/24 hour

(3)

3. Distance to Nearest Surface Water/Name:

4: 2,500 feet to an unnamed tributary to the Roanoke River

(1)

4. Physical State:

3: Liquids (based on presence of PAHs and TCE)

(1)

B. Containment:

3: No containment structure

(1)

C. Waste Characteristics:

1. Toxicity/Persistence:

18: Benzo(a)pyrene, trichloroethene, arsenic, and chromium

(5)

2. Hazardous Waste Quantity:

5: Quantity Unknown

(1)

POPULATION EXPOSURE ROUTE

(Ref. #)

A. Residential Population: - Not Scored

1. Toxicity:
2. Targets:
 - a. High Risk Population:
 - b. Total Resident Population:
 - c. Sensitive Environment:

B. Nearby Population:

1. Likelihood of Exposure Score: 0.50
 - a. Area of Contamination:
75: >5 to 10 acres
 - b. Accessibility/Frequency of Use:
50: Observed contamination on land protected by continuous barrier to entry
2. Toxicity:
9: Benzo(a)pyrene, Trichloroethene, arsenic, and chromium (5)
3. Targets: $0.1 (\underline{62.09}) + 0.05 (\underline{186.28}) = \underline{15.52} \rightarrow 16$
 - a. 0 - .25 mile: $3.14 (0.5^2) \times \underline{79.1} \text{ people/sq.mi.} = \underline{62.09}$ (4)
 - b. .25 - 1 mile: $3.14 (1^2 - 0.5^2) \times \underline{79.1} \text{ people/sq.mi.} = \underline{186.28}$ (4)

A. Waste Characteristics:

1. Reactivity and Incompatibility:
2. Toxicity:
3. Hazardous Waste Quantity:

B. Targets:

1. Population within 4-mile Radius/Distance from Hazardous Substance:
2. Distance to Sensitive Environment:
3. Land Use: